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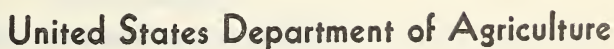
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**Agricultural Research Service**  
**U. S. Department of Agriculture**

**February 1950**  
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# Nutrition . . .

**up-to-date  
up to you**

Are you one of this country's 33,000,000 homemakers—and trying to do a blue-ribbon job of feeding a family well?

If so, you know that your task is vital to family health and important to happiness, and it isn't easy. You have a 4-point food program:



To serve enjoyable meals.

To keep your family well nourished.

To practice thrift when need be.

To save time and energy where you can.

This booklet offers suggestions and other helps that take these combined problems into account.

The nutrition section aims to bring the homemaker up-to-date quickly and to show the importance of food for health.

The food planning section shows an orderly way to provide meals that contain the vitamins and other nutrients in the quantities which different individuals need.

In the sections on food buying and storing, there are pointers on thrift.

# **Nutrition . . .**

## **the science**

## **of food at work**

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Nutrition is the science that deals with food at work—food on the job for you.

Modern knowledge of food at work brings a new kind of mastery over life. When you—and your family—eat the right food, it does far more than just keep you alive and going.

The right food helps you to be at your best in health and vitality. It can even help you to stay young longer, postponing old age. An individual well fed from babyhood has a more likely chance to enjoy a long prime of life. But at any age, you are better off when you are better fed.

### **Food's three big jobs**

1. Food provides materials for the body's building and repair. Protein and minerals (and water) are what tissue and bone are chiefly made of. Children must have these food materials to grow on; and all life long the body continues to require supplies for upkeep.
2. Food provides regulators that enable the body to use other materials and to run smoothly. Vitamins do important work in this line, and minerals and protein too.
3. Food provides fuel for the body's energy and warmth. There is some fuel in every food.

### **Body's needs, A to Z**

From vitamin A to the mineral zinc, a list of nutrients—chemical substances that the body is known to require from food—would total more than 40. And there may be some not yet detected.

You can put nutrition knowledge to use without being introduced to all of the body's A to Z needs. When daily meals provide sufficiently for the following key nutrients, you can be reasonably sure of getting the rest.





## Protein

Protein was named from a Greek word meaning "first." Nearly a hundred years ago, it was recognized as the main substance in all of the body's muscles and organs, skin, hair, and other tissues. No simple substance could build and renew such different tissues, and protein has proved to be complex and varied.

Protein in different foods is made up of varying combinations of 22 simpler materials called amino acids. If need be, the body can make its own supply of more than half of these amino acids. But the remaining amino acids must come ready-made from food. And to get the best use from these special ones, the body needs them all together, either in one food or in some combination of foods.

The best quality proteins have all of these especially important amino acids, and worth-while amounts of each.

You get top-rating proteins in foods from animal sources, as in meat, poultry, fish, eggs, milk, cheese. Some of these protein foods are needed each day; and it is an advantage to include some in each meal.

Next best for proteins are soybeans and nuts and dry beans and peas. When these are featured in main dishes, try to combine them with a little top-rating protein food, if you can.

The rest of the protein required will then come from cereals, bread, vegetables, and fruits. Many American-style dishes, such as meat and vegetable stew, egg sandwiches, macaroni and cheese, cereal and milk, are highly nourishing combinations. For in the body's remarkable chemistry, the high-grade proteins team with the less complete proteins in many companion foods and make the latter more useful than if eaten alone.



## Calcium

Calcium is one of the chief mineral materials in bones and teeth. About 99 percent of all the calcium in the body is used for framework. Small but important, the other 1 percent remains in body fluids, such as the blood. Without this calcium, muscles can't contract and relax and nerves can't carry their messages.

For calcium to be used properly, other substances are needed too in right quantities, vitamin D and phosphorus, for example.

Many people go through life with bones that are calcium-poor. If a child gets too little calcium in his food or if his bones fail to deposit the calcium properly, then the bones will be smaller than they should be, or malformed as when legs are bent in rickets. Older people who are calcium-poor may have brittle bones that break easily and mend slowly. Whether you are young or old, it's a good thing for diet to be calcium-rich.

The outstanding food for calcium is milk. You can hardly get enough calcium without using a good deal of milk in some form. Next-best foods for calcium are some of the leafy green vegetables—notably turnip tops, mustard greens, and kale.



## Iron

One of the essential materials for red blood cells is iron. Without its iron supply, the blood could not carry oxygen from the lungs to each body cell.

When meals are varied, you get some iron from many different foods. Liver is outstanding for iron. And one good reason for eating leafy green vegetables is their iron content.

Some of the other foods that add iron are egg yolks, meat in general, peas and beans of all kinds, dried fruits, molasses, bread and other cereal foods made from the whole grain or enriched.



## Iodine

Your body must have small but steady amounts of iodine to help the thyroid gland to work properly. The most familiar bad effect of getting too little iodine is a swelling of the gland, called goiter.

Along the sea coast, and in some other parts of the United States, iodine is contained in the drinking water and vegetables and fruits grown in local soil. But too little iodine in water and soil is the cause of a wide "goiter belt" across the country, particularly around the Great Lakes and in northwestern States.

It is well to plan for iodine, particularly if you live inland. Eating salt-water fish or other food from the sea at least once

a week will help. But the best line of defense is to use iodized table salt regularly. In this kind of table salt, the iodine lost from natural salt in refining is restored.

One point of warning must be added. Using iodized salt regularly can prevent simple goiter, but it may be harmful to a goiter far-advanced. If in doubt about its use, see a competent physician.

## Vitamins in general

Nearly 20 vitamins that are known or believed to be important to human well-being have thus far been discovered. A few more vitamins are known to be important to such creatures as fish, chickens, or insects, but not to people.

When you eat a variety of food you are pretty sure of getting a well-rounded assortment of the vitamins you need—except perhaps vitamin D. And you may also be getting other vitamins still undetected in food, but serving you just the same.

Separate doses of one or more selected vitamins are best taken under doctors' orders. For research is showing more and more instances in which a vitamin or other nutrient seeks a different nutrient in a meal as a special partner to assist in its work. When a vitamin pill brings in a mass army, the right partners may not be ready to use so much specialized help.

The following vitamins are of practical importance in planning family meals.



### Vitamin A

Vitamin A is important to the young for growth. And at all ages it is important for normal vision, especially in dim light.

In one way or another, many vitamins help protect the body against infection, and vitamin A's guard duty is to help keep the skin and the linings of nose, mouth, and inner organs in good condition. If these surfaces are weakened, bacteria can invade more easily.

You can get vitamin A from some animal foods. Good sources are liver, egg yolks, butter, whole milk and cream, and cheese made from whole milk or cream. Fish-liver oils which children take for vitamin D are rich in vitamin A besides.

From many vegetable foods you can get carotenes, which are yellow-orange substances that the body converts into vitamin A. Green, yellow, and some red vegetables are good sources of carotene. One good reason for including a vegetable from the "leafy, green, and yellow group" every day is to keep stocked with this vitamin. Margarine, a vegetable fat, is nearly always fortified with vitamin A or carotene.

Some vitamin A can be stored in the body. So it is to your advantage to eat heartily of foods that provide for it, such as the green and yellow vegetables. A savings account of vitamin A in your system may be drawn upon, if in any emergency this vitamin is wanting in the diet.



## The B-vitamin family

There was once supposed to be just one vitamin B. Then, vitamin B was found to be complex and it has in time been separated into about a dozen vitamins, each with particular duties and importance. Most of them are now called by names that tell something about their chemical nature.

Thiamine, riboflavin, and niacin are the most generally known and best understood B's. Getting enough of these in food helps with steady nerves, normal appetite, good digestion, good morale, healthy skin.

When these B's are seriously wanting in diet, malnutrition ills such as beriberi and pellagra follow. But far more common in this country are borderline cases. The chronic grouch, the lazybones, the nervous man, the housewife with vague complaints, may be showing effects of food providing too little of these important B's.

Recently identified B's are folic acid and vitamin B<sub>12</sub>, both important for healthy state of the blood. Folic acid and B<sub>12</sub> are being used medically with success in treating two hard-to-cure diseases—pernicious anemia and sprue.

Few foods contain real wealth of B vitamins, but in a varied diet many foods contribute some and so build an adequate supply.

One way to make sure of raising your B level is to use regularly bread, flour, and cereals that have been made from whole grain or that have been enriched so as to restore important B vitamins.

Getting ample milk in diet is important for B's, too, and for riboflavin in particular.



B vitamins play a part in converting fuel in foods into energy. It follows that any one who eats large quantities of starches and sugars also requires more food containing B vitamins.



## Vitamin C

The first vitamin separated out from food was vitamin C, now also called ascorbic acid. Tissues throughout the body can't keep in good condition without vitamin C.

When diet is very low in this vitamin, gums are tender and bleed easily, joints swell and hurt, and muscles weaken. In advanced stages, the disease called scurvy results. This misery used to attack sailors on long voyages when they got no fresh food. In time, they found they could fight scurvy with lemon, lime, or orange juice added to rations. Much later, vitamin C, the scurvy-fighter itself, was discovered.

Scurvy is rare now in this country. But many people get too little vitamin C for their best state of health.

You need some food rich in vitamin C daily, because the body can't store much of this vitamin.

All of the familiar citrus fruits are bountiful sources of vitamin C. Half a glass (4 ounces) of orange or grapefruit juice, fresh or canned, goes far toward meeting a day's needs. The same is true of half a grapefruit, a whole orange, or a couple of tangerines.

Other good sources of vitamin C include tomatoes and tomato juice, canned or fresh; fresh strawberries and cantaloup; also raw green food, such as cabbage, green pepper, and green lettuce. The potato's many values include some vitamin C.

## Vitamin D



Vitamin D is especially important to the young, because it works with minerals to form straight, strong bones, and sound teeth. Babies with bowlegs may have had too little vitamin D. An individual should get some of this vitamin regularly, at least through the growing stage. It is also important for pregnant and nursing mothers.

"Sunshine vitamin" is vitamin D's nickname, because the sun's rays striking the skin have power to change certain substances in the skin into vitamin D.

From baby days on, children can make good use of sunshine. But they should be protected well against sunburn or sunstroke.

Children can't get much vitamin D from the sun when they must wear thick warm clothes for cold weather, or when sunlight is cut off by clouds, smoke, fog, dust, or ordinary window glass.

A few foods, such as egg yolk, butter, salmon, tuna, and sardines, help out with vitamin D; and some milk, both fresh and evaporated, has vitamin D added. But to supplement sunshine and food, babies and young children usually need to take a special vitamin D preparation or one of the fish-liver oils regularly. These oils from halibut, shark, and cod are the richest natural sources of this vitamin known.



## Fuel

For the body's energy in work and play, fuel must come from food. The value of foods for this purpose is figured in calories. Main sources are starches and sugars, and fats, but all foods furnish calories—some many, some few, in a given-size portion.

Your needs for food as fuel depend mainly on two things: The size of your body and how active you are. An average-size man who is a desk worker with no strenuous sport or hobby needs about 2,400 calories from daily food. A fast-growing, lively teen-ager, boy or girl, may need more calories than this grown man.

If body weight stays about right for your height and build it's a sign that fuel intake from food matches your needs. The calories are taking care of themselves.

But suppose you are overweight . . . what then?

When the body gets more energy food than it can use, it stores up the excess as fat. Accumulation of too much fat is sometimes termed the most frequent malnutrition problem among adults in this country. To put it more plainly, many adults eat too much.

Up to 35 years of age, if you can't be just right in weight, it is better to be plump than skinny. Beyond 35, excess fat becomes a greater health liability than thinness. Ills such as high blood pressure and heart and kidney ailments are more common among overweights. Underweights tend to tire readily and may be an easy prey to infections.



## Controlling weight



If you are under 20 years of age, don't try to reduce except under a physician's guidance. This is also advisable if you are a young mother, or have anything wrong with heart or other organs. If you are not in these groups, and need to reduce, take it slowly. A pound or two off a week is plenty.

To reduce calories without starving your body of its other needs:

Eat three meals a day, but don't be tempted by between-meal snacks.

Avoid high-calorie foods like the fat on meat, cooking fat, salad oil, fried foods, gravies and rich sauces, nuts, pastries, cakes, cookies, rich desserts, candies, jellies, and jams. Eat small-sized servings of bread or cereal.

Don't skimp on fruits and vegetables. Eat a variety—yes, potatoes, too. A medium-sized potato has no more calories than a big orange or a big apple. But take fruits and vegetables straight—vegetables without cream sauce or fat, fruit without sugar and cream. Don't skimp on protein-rich foods, for you need plenty of lean meat, milk, and eggs.

If you are underweight you need to turn the tables to put some fat on your bones. You need three balanced meals, as overweights do. To these meals, you can freely add the extras shunned by the weight reducers—such as rich gravies and desserts, salad dressings, and jams. And you can well take some extra food as between-meal snacks.

## Finding out what's in foods

Taking foods apart chemically, scientists are learning more exactly, nutrient by nutrient, what each familiar food can provide for the body's needs.

The table on the following page gives a rough idea of how well different kinds of foods in this country's diet can provide for the body's various needs. You can judge from this table that no one food has a wealth of all nutrients—not even milk, “the most nearly perfect food.” Most foods contain more than one nutrient, and so help in more ways than one.

## Up to you

●To get all the nutrients needed, it's wise to choose a variety of foods. It is also important to get enough of the different nutrients from food. A food plan worked out by nutritionists, such as the one given on pages 14 and 15, is a handy guide.

●You will be off to a good start nutritionally if you plan meals by some orderly plan, so that daily food includes needed quantities of protein, minerals, and other nutrients.

●You are following through effectively when you cook by up-to-date methods that keep delicate vitamins and minerals from being wasted.

●And, rounding out a family nutrition program, you can make mealtime interesting and food associations pleasant. For, after all, food must be *eaten* to count for good nutrition. You can, for example . . .

●Make a collection of nutritious recipes that the whole family enjoys, and use them reasonably often.

●When re-using one of these favorites, vary the meal with different food combinations.

●If an inexpensive dish seems dull, vary flavor with seasonings, or combine with other foods different ways.

●Use contrast in food colors, flavors, textures. Some bright-colored food, something crisp, for example, can heighten the eye appeal and appetite appeal of a meal.

●Give children small servings, remembering that big amounts may be discouraging. It's better for a child to form the habit of cleaning his plate and asking for a second helping, if wanted.

●Introduce a new food to a young child in sample tastes, and at the start of a meal when he is hungry . . . and if he doesn't like it at first, try another day.

## Serving by serving ... foods provide for daily needs

Stars on this page give a very rough idea of how servings from groups of familiar foods contribute toward dietary needs.

A serving that rates 5 stars provides more than 50 percent of the day's need for a nutrient. A 4-star serving provides about 40 percent; 3-star serving, 30 percent; 2-star serving, 20 percent; 1-star serving, 10 percent. Smaller amounts of nutrients are not shown. These ratings are based on daily allowances of nutrients for a moderately active man as recommended by the National Research Council. Some foods within a group have more of a nutrient, some less; but in a varied diet, which is common in this country, a group is likely to average as shown.

Kind of food	Size of serving	Protein	Calcium	Iron	Vitamin A value	B-vitamins			Vitamin C (ascorbic acid)	Food energy (in calories)
						Thiamine	Riboflavin	Niacin		
Leafy, green, yellow vegetables.	1/2 cup...			★	★★★★				★★	30
Tomatoes, tomato products.	1/2 cup...			★	★★★			★	★★★	35
Potatoes.....	1 medium.			★		★		★	★	105
Sweetpotatoes.....	1 medium.			★	★★★★★	★		★	★★★	165
Other vegetables...	1/2 cup...								★	40
Citrus fruits.....	1/2 cup...								★★★★★	55
Other fruits.....	1/2 cup...				★				★	70
Milk, cheese, ice cream.	1 cup milk.	★	★★★		★	★	★★			170
Meat, poultry, fish..	4 ounces.	★★		★★	★	★★	★	★★★		225
Eggs.....	1 egg....	★		★	★		★			80
Dry beans and peas, nuts.	3/4 cup beans cooked.	★★	★	★★★		★★	★	★★		215
Baked goods, flour, cereals.	2 slices bread.	★		★		★	★	★		130
Butter, fortified margarine.	1 pat....				★					50
Other fats (includes bacon, salt pork).	2 tablespoons.									230
Sugar, all kinds.....	2 teaspoons.									35
Molasses, sirups, preserves.	2 tablespoons.			★						115

★★★★ More than 50 percent of daily need.

★★★ About 40 percent of daily need.

★★★ About 30 percent of daily need.

★★ About 20 percent of daily need.

★ About 10 percent of daily need.

# Have a food plan



---

To see that your family is well fed, it's wise to use a plan. This way you can be sure to provide each important kind of food—and enough of it.

A food fact worth knowing is: When families in this country are poorly fed, the foods they neglect are most often milk and milk products, and vegetables and fruits—especially the leafy, green, and yellow vegetables and citrus fruits. Watch for these in planning.

## A ready-made food plan

A helpful guide for weekly shopping and meal planning is a food plan worked out by nutritionists. Such a plan is given on pages 14 and 15. Other plans could be made that would measure up—as this plan does—to the National Research Council's yardstick of good nutrition. Any plan that does measure up must bring into the kitchen the makings of meals that offer recommended amounts of protein, minerals and vitamins, and food energy.

In the plan given, foods are in groups according to their major contributions of nutrients, as well as their place in the meal. Amounts to provide for adequate diets are shown in pounds and quarts of food for a week.

More information about planning by food groups, and the way they work out in servings, is given on pages 16 to 20. You can see that there is ample choice within groups to allow for varied meals from day to day wherever you live. The groups allow, too, for stressing family favorites among the foods.

In the pages on food groups, the "Plan to use" headings are intended as a guide, if you follow a food plan of your own, not exactly like the one given.

## Ways to use this plan

You can make use of the plan on pages 14 and 15 in several ways. It can serve as a shopping guide, as it stands, to show the approximate amount of food needed for each member of the family. Or you can compare it to kinds and quantities of food you regularly use, just to make sure that you are not short in any important kind.

If you have a garden or put up food for the winter, the food plan can help as a general guide to amounts of foods that the family will use.



## **To figure your family's needs**

To use the food plan, figure weekly amounts of the food groups that will fit your family.

The rows of figures in the plan are arranged to show food quantities according to age, sex, and how active the individual is. Where a range is given: For children, the first quantity is for the youngest age. For adults, the first quantity is for the less active. The most active adults do really heavy work or take strenuous exercise.

For pregnant and nursing women, the first quantity is for pregnant and the second for nursing women.

No figures are given for children under 1 year because they are often breast-fed or have formulas or other food prepared especially for them.

Guided by these ranges, you can estimate the quantity needed for each person in the family. Use judgment in doing this. If a child is having a spurt of growing, he may need the amount of food usually suggested for children a year or two older.

As you add up the amount of each kind of food your family members need in a week, write the figure in the column provided at right of the food plan sheet. This is your shopping guide, to use as it stands or to compare with amounts you've been buying.

## **Your food and your money**

Quantities in the food plan can be bought for about the same money that the average family in this country spends for food. This assumes that you will choose moderate-price foods, or mix some cheaper foods with more expensive ones.

If you have more money to spend, you can choose now and again the more expensive items, such as luxury foods and those out of season. On the other hand, if you want to cut down food costs, reduce somewhat—perhaps by about one-third—the quantities of meat, poultry, and fish in the plan, and also the group described as “other vegetables and fruits.” To take their place, increase potatoes and cereals by about one-fourth.

In either case, try not to change very much the quantities given in the plan for milk and milk products, leafy, green, and yellow vegetables, and tomatoes and citrus fruits.

# A food plan

(Quantities for

Kinds of food	For children 1 to 6 years	For children 7 to 12 years	For girls 13 to 20 years
<b>Leafy, green, and yellow vegetables</b>	2-2½ pounds	2½-3 pounds	3½ pounds
<b>Citrus fruits, tomatoes</b>	2-2½ pounds	2½-3 pounds	3 pounds
<b>Potatoes, sweetpotatoes</b>	½-1 pound	1½-2 pounds	2½ pounds
<b>Other vegetables and fruits</b>	2 pounds	2½ pounds	3½ pounds
<b>Milk, cheese, ice cream (milk equivalent) <sup>1</sup></b>	5½ quarts	6 quarts	6 quarts
<b>Meat, poultry, fish <sup>3</sup></b>	1-1¼ pounds	2 pounds	2½-3 pounds
<b>Eggs</b>	6-7 eggs	7 eggs	7 eggs
<b>Dry beans and peas, nuts</b>	1 ounce	2 ounces	2 ounces
<b>Baked goods, flour, cereals (flour equivalent) <sup>1</sup></b>	1-1½ pounds	2-3 pounds	2½-3 pounds <sup>2</sup>
<b>Whole-grain, enriched, or restored</b>			
<b>Fats, oils</b>	¼ pound	½-1 pound	¾ pound
<b>Sugar, sirups, preserves</b>	¼-½ pound	¾ pound	1 pound

<sup>1</sup> For explanation of milk-equivalent and flour-equivalent foods see pp. 17 and 18.

<sup>2</sup> Larger quantities are for the younger girls.



# for good nutrition

one week)

For boys 13 to 20 years	For women		For men, all activities	Total suggested for your family
	All activities	Pregnant and nursing		
3½-4 pounds	3½-4 pounds	4 pounds	3½-4 pounds	
3-3½ pounds	2½-3 pounds	3½-4½ pounds	2½-3½ pounds	
3½-4½ pounds	2-3 pounds	2-3 pounds	3-5 pounds	
3½ pounds	3-4 pounds	3-3½ pounds	3-4 pounds	
6 ½ quarts	4 quarts	7-10 quarts	4 quarts	
3 pounds 7 eggs 4-6 ounces	2½-3 pounds 6-7 eggs 2-4 ounces	3 pounds 7 eggs 2 ounces	3-3½ pounds 6-7 eggs 4 ounces	
4-5 pounds	2-4 pounds	2-2½ pounds	3-7 pounds	
1-1½ pounds	¾-1 pound	¾ pound	1-2 pounds	
1-1½ pounds	¾-1 pound	¾ pound	1-1½ pounds	

<sup>3</sup> To meet the iron allowance needed by children 1 to 6 years, girls 13 to 20, and pregnant and nursing women, include weekly 1 large or 2 small servings of liver or other organ meats.

# What's in each food group

Here are common foods grouped as in the plan on pages 14 and 15. Foods in each group can be used similarly in meals, so within the group there is room for variety. Foods in each group provide about the same nutrients but some are better providers than others.

## Leafy, green, and yellow vegetables

Leafy, green, and yellow vegetables are rich in vitamin A value, especially the dark green leafy kinds, and carrots. They also provide worth-while amounts of riboflavin, iron, and some calcium; and cabbage, broccoli, brussels sprouts, and greens offer vitamin C.

Plan to use: 1 or more servings daily.

The food plan provides: 10 to 12 servings per week.

All kinds of greens—collards, kale, turnip greens, spinach, and many others, cultivated and wild; carrots, peas, snap beans, okra, green asparagus, broccoli, brussels sprouts, green lima beans, pumpkin, yellow squash, green cabbage.

## Citrus fruits, tomatoes

Citrus fruits and tomatoes are mainstay sources of vitamin C.

Plan to use: 1 or more servings daily.

The food plan provides: 7 to 10 servings a week.

Oranges, grapefruit, tangerines, other citrus fruit, tomatoes.

The following foods are also good sources of vitamin C and may be used as alternates:

If eaten raw—cabbage, salad greens, green peppers, turnips, strawberries, pineapple, cantaloup. If cooked briefly, in very little water—cabbage, broccoli, brussels sprouts, greens.

## Potatoes, sweetpotatoes

Potatoes and sweetpotatoes contain a number of nutrients. Because of the quantities in which they are eaten white potatoes can become quite important as a source of vitamin C. Sweetpotatoes are valuable for vitamin A in addition to vitamin C.

Plan to use: 1 or more servings daily.

The food plan provides: 7 to 9 servings a week.

## **Other vegetables and fruits**

These vegetables and fruits help toward a good diet with vitamins and minerals.

Plan to use: 1 or more servings daily.

The food plan provides: 10 to 12 servings a week.

Beets, cauliflower, corn, cucumbers, onions, sauerkraut, turnips, white cabbage, apples, peaches, bananas, berries, rhubarb, dried fruit—all vegetables and fruits not included in other groups.

## **Milk, cheese, ice cream**

Milk—whole, skim, evaporated, condensed, dry, buttermilk—is our leading source of calcium. Milk also provides high-quality protein, riboflavin, vitamin A, and many other vitamins and minerals.

Plan to use, as the food plan provides, the following amounts of milk daily. Include milk used for drinking as well as cooking:

Children through teen age: 3 to 3½ cups.

Adults: 2 or more cups.

Pregnant women: 1 quart.

Nursing mothers: 1½ quarts.

On the basis of calcium they contain, the following may be used as alternates for 1 cup of milk: Cheddar cheese, 1½ ounces; cream cheese, 15 ounces; cottage cheese, 11 ounces; ice cream, 2 to 3 large dips.

## **Meat, poultry, fish**

Meat, poultry, and fish are important primarily for high-quality protein. Foods in this group also provide iron, thiamine, riboflavin, niacin, vitamin A.

Plan to use: 1 serving daily, if possible.

The food plan provides: 7 to 8 servings a week.

All kinds, including liver, heart, and other variety meats. Count bacon and salt pork in with fats.

## **Eggs**

Eggs are a source of high-quality protein, iron, vitamin A, riboflavin, vitamin D, and provide some calcium and thiamine.

Plan to use: 4 or more a week.

The food plan provides: 6 or 7 a week.

## **Dry beans and peas, nuts**

Dry beans and peas and nuts contain good protein, also some calcium, iron, thiamine, riboflavin, and niacin.

Plan to use: 1 or more servings a week.

The food plan provides: 1 to 2 servings a week.

Dry beans of all kinds, dry peas, lentils; soybeans, soya products; peanuts, other nuts; peanut butter.

## **Baked goods, flour, cereals**

Whole-grain cereals, or those with added vitamins and minerals or restored to whole-grain value, provide significant amounts of iron, thiamine, riboflavin, niacin. Foods in this group also help out with protein and calories.

Plan to use as the food plan provides: Some every day.

Flour or meal made from wheat, corn, oats, buckwheat, rye; cooked and ready-to-eat cereals; rice, barley, hominy, noodles, macaroni; breads, other baked goods.

Quantities suggested in the food plan are in terms of pounds of flour and cereal. Bread and other baked goods average two-thirds flour by weight. Therefore, count  $1\frac{1}{2}$  pounds of bread and other baked goods as 1 pound of flour.

## **Fats, oils**

Butter and fortified margarine are rich in vitamin A value. Like all fats they furnish many calories.

Plan to use as the food plan provides: Some table fat daily; other fats as needed in cooking.

Butter, margarine, salad oil, shortening, bacon, salt pork, lard, suet, drippings.

## **Sugar, sirups, preserves**

Sugar, sirups, preserves are useful mainly for the calories they provide for bodily energy.

The food plan includes for the average person about a pound a week.

Any kind of sugar—granulated (beet or cane), confectioner's, brown, and maple; molasses or any kind of sirup or honey; jams and jellies; candy.





# Servings and pounds

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How much meat to buy for dinner? How many servings will come from a pound of fresh beans, a No. 2½ can, or a frozen package? The food shopper with an eye to thrift and good management learns to buy carefully just what she can use.

The figures below and on the following page can help you decide how much to buy and, when reading market ads, you can use these figures to help decide what are real bargains.

The amount of meat, poultry, and fish per serving varies with the amount of bone and fat. It also varies with the amount of extenders—such as stuffing, potatoes, rice—used with the meat.

Size of serving for each fruit and vegetable is given for whichever way it is most commonly served—cooked or uncooked. Size of serving for dry beans and peas and for cereals and cereal products—except flaked and puffed—is given for the cooked form.

## Meat, poultry, fish

### MEAT                      Amount to buy per serving

Much bone or gristle . .	1/2 to 1 pound
Medium amounts of bone . . . . .	1/3 to 1/2 pound
Little bone . . . . .	1/4 to 1/3 pound
No bone . . . . .	1/5 to 1/4 pound

### POULTRY dressed weight <sup>1</sup>

#### Chicken:

Broiling . . . . .	1/4 to 1/2 bird
Frying, roasting . .	about 1 pound
Stewing . . . . .	1/3 to 1 pound
Ducks . . . . .	1 to 1 1/4 pounds
Geese . . . . .	3/4 to 1 pound
Turkeys . . . . .	2/3 to 3/4 pound

### POULTRY ready-to-cook weight <sup>1</sup>

### Amount to buy per serving

#### Chicken:

Broiling . . . . .	1/4 to 1/2 bird
Frying, roasting . .	3/4 to 1 pound
Stewing . . . . .	1/4 to 1 pound
Ducks . . . . .	3/4 to 1 pound
Geese . . . . .	3/4 to 1 pound
Turkeys . . . . .	1/2 to 1 pound

### FISH

Whole or round . . . . .	1 pound
Dressed, large . . . . .	1/2 pound
Steaks, fillets . . . . .	1/4 pound

<sup>1</sup> Number of servings obtained from a bird depends on the kind, weight, age, sex, grade, and fatness of the bird and the way it is prepared.

## Vegetables and fruits

FRESH	Size of serving	Servings per pound <sup>2</sup>
Asparagus:		
Cut.....	1½ cup	4
Spears.....	4-5 stalks	4
Beans, lima.....	1½ cup	<sup>3</sup> 2
Beans, snap.....	1½ cup	6
Beets, diced.....	1½ cup	4
Broccoli.....	2 stalks	3-4
Brussels sprouts.....	1½ cup	5-6
Cabbage:		
Raw, shredded....	1½ cup	7-8
Cooked.....	1½ cup	4-5
Carrots:		
Raw, shredded....	1½ cup	8
Cooked.....	1½ cup	5
Cauliflower.....	1½ cup	3
Celery, cooked....	1½ cup	3-4
Collards.....	1½ cup	2
Corn, cut.....	1½ cup	<sup>4</sup> 2
Eggplant.....	1½ cup	4
Onions, cooked....	1½ cup	4
Parsnips.....	1½ cup	4
Peas.....	1½ cup	<sup>3</sup> 2
Potatoes.....	1½ cup	4-5
Spinach.....	1½ cup	3-4
Squash.....	1½ cup	2-3
Sweetpotatoes.....	1½ cup	3-4
Turnips.....	1½ cup	4

FRESH	Size of serving	Servings per pound <sup>2</sup>
Apricots.....	2 medium	5-6
Berries, raw.....	1½ cup	4-5
Cherries, pitted, cooked.....	1½ cup	2
Plums.....	2 large	4
Rhubarb, cooked...	1½ cup	4

For apples, bananas, oranges, and pears, count on about 3 to a pound; peaches, 4 to a pound.

DRY		
Dry beans.....	¾ cup	9
Dry peas, lentils....	¾ cup	7

CANNED		Per can
8-ounce can.....	1½ cup	2
No. 2 can.....	1½ cup	4-5
No. 2 ½ can.....	1½ cup	6-7
No. 3 cylinder (46 oz.).....	1½ cup	11-12

FROZEN		Per package
Family-size packages.....	1½ cup	3-4
Juices, concentrated, 6 fluid ounces....	1½ cup	6

## Cereals and cereal products

	Size of serving	Servings per pound
Flaked corn cereals..	1 cup	18-24
Other flaked cereals.	¾ cup	21
Puffed cereals.....	1 cup	32-38
Corn meal.....	¾ cup	16
Wheat cereals:		
Coarse.....	¾ cup	12
Fine.....	¾ cup	16-22

	Size of serving	Servings per pound
Oatmeal.....	¾ cup	13
Hominy grits.....	1½ cup	20
Macaroni and noodles.....	¾ cup	12
Rice.....	1½ cup	16
Spaghetti.....	¾ cup	13

<sup>2</sup> As purchased. <sup>3</sup> In pod. <sup>4</sup> In husk.





# Smart buying

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## Meat

It is not easy for household buyers to judge quality of meat.

Best guides for selecting the meat you want are the U. S. Department of Agriculture grades—which more retail stores will use as consumers request graded meat. The grades you are most likely to find on the market are Prime, Choice, Good, and Commercial.

The Federal grade name appears in purple on most of the retail cuts of meat.

Another purple stamp which may appear on retail cuts is the round one indicating that the meat has been inspected and passed as wholesome food. All graded meat is inspected, but not all inspected meat is graded.

Meat packers, wholesalers, or retailers may use their own brand names, not to be confused with USDA grades. Letters such as AA and A are never used as meat grades by the USDA.

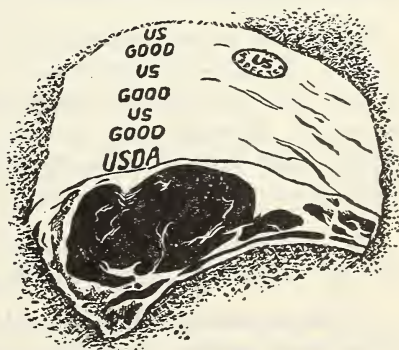
You may find on your market Federally graded beef, lamb, mutton, veal, and calf. Pork is not usually graded. But beef is the meat you will most often find with a USDA grade stamp.

## Beef grades

*U. S. Prime.*—Excellent quality and flavor, tender and juicy, good distribution of fat through the lean meat.

*U.S. Choice.*—Very acceptable quality. This grade is popular because it combines a moderate amount of fat with desirable eating quality. If you find graded beef at your butcher's, it is most likely to be U. S. Choice.

*U. S. Good.*—Cuts of this grade are preferred by consumers who desire relatively tender beef with a high ratio of lean to fat.



*U. S. Commercial.*—Most beef of this grade is produced from mature animals. It carries a fairly thick fat covering and lacks natural tenderness. Such Commercial grade meat is often a good buy, but usually requires long, slow cooking.

## **If you buy ungraded beef**

You can be reasonably sure of high-quality beef when the lean meat is light red, velvety-appearing, and liberally veined with fat, when bones are red, and the fat is flaky and white.

## **Meat and your money**

The amount of bone and fat must be considered in figuring the cost of meat—beef, pork, lamb, or veal. For example, beef short ribs may cost less per pound than hamburger but will yield only one-third to one-half as many servings.

In buying beef when you plan to have broiled steaks or rare roasts, select Prime, Choice, or Good grades. But when you want pot roasts, you may do just as well to buy Commercial grade.

For hamburger, meat loaf, and stews, Commercial beef may be just as satisfactory as Choice or Good and is often more economical.

## **Poultry**

Most poultry is marketed ready-to-cook these days, although live and dressed birds still appear in some markets.

*Dressed* poultry has been bled and picked, but internal organs, head, and feet have not been removed. Ready-to-cook birds have been bled and picked, and internal organs, head, feet, and oil sac have been removed. Pinfeathers have been pulled, and the bird has been thoroughly cleaned inside and out. The cleaned giblets and neck are usually packed inside.

*Dressed birds* are not inspected for wholesomeness or marked individually for quality. *Ready-to-cook* birds may bear the Federal inspection mark—a circle—to show that they have been inspected and passed for wholesomeness by Federal inspectors. *Inspected ready-to-cook birds* may also bear the quality grade mark—a shield. Both Federal marks bear the letters “U. S.” They may be used in combined form, as a shield within a circle.

For top quality, choose a well-fleshed bird with well-distributed fat, and skin with few blemishes. Very fat birds are often wasteful.

*Considering economy.*—It may not be an economy to buy live or dressed birds. In the same market dressed birds cost more per pound than live ones, and

ready-to-cook birds more per pound than dressed. But the dollar spent on live or dressed birds pays for more waste.

The larger, well-fleshed birds are often better buys than smaller ones. They usually have more meat in proportion to bone.

## **Chickens and turkeys**

For broiling, frying, or roasting, choose a plump young chicken. Smaller sizes are best for broiling. Young birds have smooth, tender skin, soft tender meat, and a flexible breastbone. For stewing or braising, choose an older bird with coarser skin and a firm breastbone.

Most turkeys are marketed when young and tender-meated—suitable for roasting. Small, very young turkeys that can be broiled or fried as well as roasted are on some markets now. Halves or quarter roasts of turkey are also marketed to suit needs of smaller families. Turkeys range from 4 to 24 pounds, ready-to-cook.

## **Ducks and geese**

Ducks have less range in size than turkeys. Ducks may weigh from 3 to 5 pounds, ready-to-cook. Most of them are marketed young, as ducklings. The heavier the duck, the fatter it usually is.

Geese come larger than ducks and are usually fatter. Geese as most commonly marketed run 8 to 12 pounds, ready-to-cook.

## **Fish**

Fish may be purchased fresh, frozen, or canned.

Fresh fish are often a good buy. It is well to know the varieties available on your market and the seasons of the year when each is most plentiful.

Most important point in buying whole fish is to be sure of freshness. Look for these signs:

Eyes—bright, clear, and bulging.

Gills—reddish-pink, free from slime.

Scales—tight to the skin, bright, and shiny.

Flesh—firm and elastic, springing back when pressed, and not separating from the bones.

Odor—fresh.

It also pays to know the most common ways fish are marketed:

*Whole or round.*—Marketed just as they come from the water. Before cooking, internal organs must be taken out and scales removed. Remove the head, tail,

and fins except on some small fish or fish to be baked. For broiling or frying, the fish may need to be split or cut into serving-size portions.

*Drawn.*—Internal organs already removed. Prepare for cooking just as whole or round fish.

*Dressed or pan dressed.*—Both internal organs and scales removed. Most dressed fish also have head, tail, and fins removed.

*Steaks.*—Cross-section slices of the larger dressed fish. Steaks are ready to cook as purchased. A cross section of the backbone is usually the only bone in a fish steak.

*Fillets.*—Meaty sides of the fish, cut lengthwise away from the backbone. Fillets are practically boneless and require no preparation for cooking. Sometimes the skin, with scales removed, is left on one side of the fillet; other fillets are completely skinned.

Whole fish may be cheaper than fillets or steaks, but remember that whole fish include considerable waste. Steaks have little bone or waste and fillets have none at all.

## Eggs

To be sure of high-quality eggs, buy graded eggs sold in cartons and kept in a refrigerator. Look for the grade and size on the label.

*Size.*—Eggs are classified by size according to weight per dozen. The four sizes most commonly found on the market are: Extra large—at least 27 ounces per dozen; large—at least 24 ounces; medium—at least 21 ounces; and small—at least 18 ounces per dozen.

In the fall, medium and small eggs may come at a better price for their size than larger ones. For some uses, you need to buy more small eggs than you would normally buy of the larger. For instance, you need more small eggs than large ones for a cup of egg whites in an angel cake.

*Quality.*—Eggs are also classified by grade according to quality.

Grades AA and A—top quality, good for all uses, but most appreciated when poached, fried, or cooked in the shell.

Grades B and C—good eggs for dishes in which appearance and delicate flavor are not so important. Use them in baked dishes, custards, sauces, and salad dressings.

Grade B eggs are often a good buy for they may cost considerably less per dozen than Grade A eggs of the same size.

Buy either white or brown eggs. Color of the shell has nothing to do with flavor or nutritive value of the egg.



## Fresh vegetables and fruits

It's a good rule to choose the fresh and avoid the shriveled, wilted, or decayed. But consider that blemishes such as blotches on apples and yellowed outer leaves of cabbage can be removed in preparing.

Experience is the best teacher in choosing quality but here are a few pointers on buying some of the fruits and vegetables.

*Apples.*—Good color usually indicates full flavor. Learn the varieties you like best for cooking and eating out of hand by buying small samples, especially if you plan to buy a large quantity later.

Remember that the same variety of apple may be tart when on the market in the fall but mellow when sold in the winter.

*Asparagus.*—Stalks should be tender and firm, tips should be close and compact. Choose the stalks with very little white—they are more tender. Use asparagus soon—it toughens rapidly.

*Beans, snap.*—Those with small seeds inside the pods are best. Avoid beans with dry-looking pods.

*Berries.*—Select plump, solid berries with good color. Avoid stained containers, indicating wet or leaky berries. Berries such as blackberries and raspberries with clinging caps may be underripe. Strawberries without caps may be too ripe.

*Broccoli, brussels sprouts, and cauliflower.*—Flower clusters on broccoli and cauliflower should be tight and close together. Brussels sprouts should be firm and compact. Smudgy, dirty spots may indicate insects.

*Cabbage and head lettuce.*—Choose heads heavy for size. Avoid cabbage with worm holes, lettuce with discoloration or soft rot.

*Cucumbers.*—Choose long, slender cucumbers for best quality. May be dark or medium green but yellowed ones are undesirable.

*Melons.*—In cantaloups, thick close netting on the rind indicates best quality. Cantaloups are ripe when the stem scar is smooth and space between the netting is yellow or yellow-green. They are best to eat when fully ripe with fruity odor.

Honeydews are ripe when rind has creamy to yellowish color and velvety texture. Immature honeydews are whitish-green.

Ripe watermelons have some yellow color on one side. If melons are white or pale green on one side, they are not ripe.

*Onions (dry).*—Size and color do not affect flavor or quality. Avoid onions with wet necks. The Bermuda and Spanish types are milder than the very hard, long-keeping varieties.

*Oranges, grapefruit, and lemons.*—Choose those heavy for their size. Smoother, thinner skins usually indicate more juice. Most skin markings do not affect quality. Oranges with a slight greenish tinge may be just as ripe as fully colored ones. Light or greenish-yellow lemons are more tart than deep yellow ones. Avoid citrus fruits showing withered, sunken, or soft areas.

*Peaches.*—Best to buy when firm, not bruised, and showing no green color.

*Peas and lima beans.*—Select pods that are well-filled but not bulging. Avoid dried, spotted, yellowed, or flabby pods.

*Pears.*—Some pears, especially winter varieties, are marketed when slightly underripe and need to be ripened at home—at room temperature. Pears are ripe and ready to eat when they are slightly soft at stem end.

*Potatoes.*—If you plan to buy a large quantity of potatoes, buy a few first to see if they are the kind you want. Early crop potatoes, marketed in the summer, tend to be less mealy when cooked than those harvested later. Avoid potatoes with wasteful deep eyes. Potatoes with green skins may be bitter.

*Root vegetables.*—Should be smooth and firm. Very large carrots may have woody cores, oversized radishes may be pithy, oversized turnips, beets, and parsnips may be woody. Fresh carrot tops usually mean fresh carrots, but condition of leaves on most other root vegetables does not indicate degree of freshness.

*Sweet potatoes.*—Porto Rico and Nancy Hall varieties—with bronze to rosy skins—are soft and sweet when cooked. Yellow to light-brown ones of the Jersey types are firmer and less moist.

## **Canned and frozen foods**

*Canned.*—You may want to choose the highest quality for plain-cooked dishes, salads, or serving “as is.” But second quality may do for combination dishes such as stews, casserole dishes, soups, and fruit puddings, where wholeness or color is not so important.

*Frozen.*—Buy only packages that are frozen solid. Avoid packages that feel soft, indicating they have started to thaw. Refreezing after thawing lowers quality.





# Wise storing

**Meat, poultry, fish.**—Important to keep cold; so store in refrigerator—35° to 40° F.

Poultry, fish, and unsmoked meat—such as roasts, chops, and steaks—must be allowed some air. Loosen any tight transparent coverings. Cover again loosely—use within a few days.

Ground fresh meat and variety meats, especially liver and brains, spoil more quickly than others. Store loosely wrapped; cook within 2 days for best flavor.

Smoked meats—such as ham, frankfurters, and bacon—and sausage, smoked or unsmoked, may be kept tight-wrapped during storage. They keep longer than unsmoked meats, although bacon and sausage are likely to change flavor.

Keep cooked meat, poultry, and fish and also broth and gravies covered and in the refrigerator. Use within a few days.

**Eggs.**—Keep in covered container in the refrigerator. Storing eggs with large end up helps to keep the yolk centered.

**Fresh vegetables and fruits.**—For best eating, most fruits and vegetables should be used fresh from garden or orchard. But if they must be held a few days, follow this storage guide:

## Refrigerated and covered

Asparagus	Celery	Onions, green
Beans, snap or wax	Corn, husked	Peas, shelled
Broccoli	Cucumbers	Peppers, green
Cabbage	Greens	Radishes
Cauliflower		

## Refrigerated, covered or uncovered

Apples (mellow)	Cherries	Peaches (soft ripe)
Apricots	Corn, in husks	Pears
Avocados	Grapes	Peas, in shell
Berries	Nectarines	Plums

## Room temperature or refrigerated

Beets	Lemons, limes	Parsnips
Carrots	Melons	Pineapples
Grapefruit	Oranges	Squash, summer

## Room temperature or slightly cooler (60° to 70° F.)

Apples (hard)	Peaches (firm)	Squash, winter
Bananas	Potatoes	Sweetpotatoes
Onions, dry	Rutabagas	Turnips

Corn stays fresh longer if not husked. Carrots and beets wilt less with tops removed. These two and parsnips keep still better if covered and refrigerated. To keep berries in best condition, store them unwashed and spread out. Watch berries for molding.

**Ripening.**—Some slightly underripe fruits and vegetables will ripen during storage if they are fresh and sound. Ripen peaches, pears, plums, avocados, and tomatoes in open air at room temperature; cantaloups will soften at room temperature but will not improve in flavor.

To ripen bananas, keep at room temperature. To prevent shriveling, keep them in a paper bag along with wet cloth or paper.

**Fats.**—Refrigerate lard, butter, margarine, drippings and rendered fats, and opened containers of salad oils. Hydrogenated fats (certain shortenings sold under brand names) can be kept at room temperature. Keep covered.

**Canned foods.**—Keep in dry place at room temperature, preferably not above 70° F. Opened jars of salad dressing should be kept in the refrigerator for finest flavor. Keep salad dressings from freezing to retain smooth texture.

**Frozen foods.**—Keep frozen hard until time to use. Refreezing after thawing lowers quality.

**Dried foods.**—Keep *dried fruits* in tightly covered jar or can at room temperature, preferably not above 70° F. In warm humid weather, move to the refrigerator.

Keep *dried eggs* in unopened packages in cool place, 50° to 55° F., or preferably in the refrigerator. After opening, keep in tightly covered can or jar in refrigerator.

Keep *dry milk* in unopened packages at room temperature, preferably not above 75° F. After opening, keep in tightly covered can or jar in refrigerator.

